

REMARKS/ARGUMENTS

Reexamination and reconsideration of this application as amended is requested. By this Amendment, Claims 10, 19, 20, 27 and 31 have been amended. No claims have been canceled. No new claims have been added. After this Amendment, Claims 1-32 remain pending in this application.

By this Amendment, several changes were made to the Specification. In the paragraph that begins on page 9, line 1, the grammar was improved to make it clearer that the web administrative interface 306 is communicatively accessible by means of a browser. No new matter was added.

In the paragraph that begins on page 9, line 15, a misspelled word was corrected and several grammatical changes were made to enhance readability. No new matter was added.

In the paragraph that begins on page 11, line 4, the phrase "to repeat" was changed to "from repeating", at three appearances, to correct the grammar. No new matter was added.

In the paragraph that begins on page 16, line 5, a misspelled word was corrected, and a single long sentence was split into the following two shorter sentences to enhance readability: "A bridge component 114 preferably remembers XML documents that it has transformed by storing them in persistent storage. The gateways 116, 118 keep their work in volatile storage, thereby improving the performance of the gateways 116, 118 relative to the performance of the bridge 114." No new matter was added.

Claims Rejection under 35 U.S.C. §102

The Examiner rejected Claims 1-8, 10-11, 14-15, 19, 20-26 and 28-32 under 35 U.S.C. §102(e), as being anticipated by Alao et al., (US 2002/0108121).

- (1) In particular, the Examiner concluded that the second step of independent Claims

1 and 28, is anticipated by Alao et al., and cited several paragraphs of Alao et al., in support thereof. Applicants respectfully disagree with the Examiner. The second step of Claims 1 and 28 is set forth below for the Examiner's convenience.

“translating the dataset from a source schema to a target schema, each schema comprising a set of data elements and a set of relationships among the data elements, according to a set of mapping rules, each rule comprising a type and instructions for obtaining one or more target data element values as a function of one or more source data element values, the type containing all the information about relationships among data elements used by the function;”

The Examiner relied upon paragraphs 0028, 0034, 0045-0047, 0129, 0139, 0174 and 0198 of Alao et al., to reject the above, second step, of Claims 1 and 28.

The Examiner's reliance upon each cited paragraph of Alao et al., is misplaced for the following reasons. Paragraph 0028 of Alao et al., merely discloses using H2O to translate HTML to SP. Paragraph 0034 of Alao et al., discloses data compression and decompression, and has no relevance to translation from one schema to another schema. Paragraphs 0045-0047 of Alao et al., mention H2O, Content Conversion and Content Filters, as three ways that content is translated, but disclose no further detail. Paragraph 0129 of Alao et al., discloses support for a communication protocol, and has no relevancy to dataset translation. Paragraph 0139 of Alao et al., discloses DAML and DATP. DAML is a metalanguage for encapsulating messages between SP application and other application servers. The DAML metalanguage facilitates translation from one kind of communication protocol into another (e.g. SMTP); however, Alao et al., disclose no details of the translation methods. DATP is a transport protocol, and is therefore not related to the Applicants' invention. Paragraph 0174 of Alao et al., discloses a scenario in which the communication protocol interacts with the Compiled Object Cache and H2O browser engine. This paragraph has no relevance to dataset translation except to mention H2O. Paragraph 0198 of Alao et al., discloses security-related issues including encryption, which are irrelevant to dataset translation from one schema to another.

There is no mention in any of the cited paragraphs of Alao et al., of any rules for translating datasets from one schema to another schema or of any structure for those

rules. Alao et al., fail to disclose rules that comprise a type and instructions with the type containing all information about relationships among the data elements used by the function specified in the instructions. Alao et al., fail to disclose any details for translating from one database schema to another database schema, and, in particular, do not disclose rules for such translations beyond suggesting that a person should translate between named pairs of languages. In particular, Alao, et al., fail to teach “translating . . . according to a set of mapping rules, each rule comprising a type and instructions for obtaining one or more target data element values as a function of one or more source data element values, the type containing all the information about relationships among data elements used by the function”, as recited in the second step of independent Claims 1 and 28. Therefore, in view of the foregoing remarks, Applicants believe that the rejection of Claims 1 and 28 under 35 U.S.C. §102(e) has been overcome. Applicants request that the Examiner allow Claims 1 and 28.

(2) In particular, the Examiner concluded that Claims 2 and 29 are anticipated by Alao et al., and cited several paragraphs of Alao et al., in support thereof. Applicants respectfully disagree with the Examiner. The Examiner relied upon paragraphs 0074, 0120, 0159 and 0179 of Alao et al., to reject Claims 2 and 29. The Examiner’s reliance upon these aforementioned paragraphs of Alao et al., is misplaced because none of the cited paragraphs teaches the concept of persistent storage, e.g., that the storage would survive a server crash. In addition, Claims 2 and 29 depend upon amended Claim 1 and 28, respectively, and because dependent claims recite all the limitations of the independent claim, it is believed that Claims 2 and 29 also recite in allowable form. Therefore, in view of the foregoing remarks, Applicants believe that Alao et al., do not teach the presently claimed invention as recited for claims 2 and 29, and that the rejection of Claims 2 and 29 under 35 U.S.C. §102(e) has been overcome. Applicants request that the Examiner allow Claims 1 and 29.

(3) In particular, the Examiner concluded that Claim 3 is anticipated by Alao et al., and cited several paragraphs of Alao et al., in support thereof. Applicants respectfully

disagree with the Examiner. The Examiner relied upon paragraphs 0038-0039, 0140, 0143, 0146, 0150 and 0197 of Alao et al., to reject Claim 3. The Examiner's reliance upon these aforementioned paragraphs of Alao et al., is misplaced for the following reasons. Paragraphs 0038-0039 of Alao et al., disclose DAML as "a domain specific instance of XML". These paragraphs do not disclose translating the DAML. Paragraph 0140 of Alao et al., merely mentions that various parts of DAML are instances of XML. Paragraph 0143 of Alao et al., discloses the fact that DAML is chosen to have small overhead (e.g., short length tag names). The focus of this paragraph is communication protocols that transport DAML without translation. Paragraph 0146 of Alao et al., merely suggests a relationship between DAML syntax and "actions for the application servers to perform". There is no mention of any method that might be used to translate DAML into some sort of action language, and no mention of the existence of rules for such translation, and certainly, there is no mention of schema or of translation of schema, in Alao et al. Paragraph 0150 of Alao et al., states, "Specific DAML requests and responses are interactions that are related to each other. The rules for their interaction are modularized in the STB and application server components." However, these rules are not rules for translating a dataset from one schema to another schema. The rules disclosed by Alao et al., relate to semantic content in the context of communication protocols, and there is no disclosure of the structure of such rules. On the other hand, the rules of the Applicants' invention relate to syntactic content in the context of database schemas. Paragraph 0197 of Alao et al., discloses how H2O manages pages and subpages. It also suggests that one could use Java Script and DOM functions in processing. Java Script is a language in which one might express instructions. DOM is a set of Java functions for parsing XML. Alao et al., do not disclose rules for translation or their structure comprising type information and instruction information. Furthermore, Claim 3 depends upon Claim 1, and because dependent claims recite all the limitations of the independent claim, it is believed that Claim 3 also recites in allowable form. Therefore, in view of the foregoing remarks, Applicants believe that the rejection of Claim 3 under 35 U.S.C. §102(e) has been overcome. Applicants request that the Examiner allow Claim 3.

(4) In particular, the Examiner concluded that Claim 4 is anticipated by Alao et al., and cited several paragraphs of Alao et al., in support thereof. Applicants respectfully disagree with the Examiner. The Examiner relied upon paragraphs 0046-0049, 0058, 0066 and 0070 of Alao et al., to reject Claim 4. The Examiner's reliance upon the aforementioned paragraphs of Alao et al., is misplaced because these paragraphs disclose business rules in the context of a communication protocol, not mapping rules for translating a dataset from one schema to another schema. In addition, Claim 4 depends upon Claim 1, and because dependent claims recite all the limitations of the independent claim, it is believed that Claim 4 also recites in allowable form. Therefore, in view of the foregoing remarks, Applicants believe that the rejection of Claim 4 under 35 U.S.C. §102(e) has been overcome. Applicants request that the Examiner allow Claim 4.

(5) In particular, the Examiner concluded that Claim 5 is anticipated by Alao et al., and cited two paragraphs of Alao et al., in support thereof. Applicants respectfully disagree with the Examiner. The Examiner relied upon paragraphs 0190 and 0197 of Alao et al., to reject Claim 5. The Examiner's reliance upon the aforementioned paragraphs of Alao et al., is misplaced because these paragraphs do not disclose mapping rules for translating a dataset from one schema to another. In paragraph 0190 of Alao et al., Java Script is merely suggested as a language that might be translated, but not as a means for expressing the instructions of mapping rules. In paragraph 0197 of Alao et al., Java Script is mentioned as a "function request (HTTP like)", which means that Java Script is part of a communication request language, and not a language for expressing instructions for mapping rules for translating schemas. In addition, Claim 5 depends upon Claim 4, and because dependent claims recite all the limitations of the independent claim, it is believed that Claim 5 also recites in allowable form. Therefore, in view of the foregoing remarks, Applicants believe that the rejection of Claim 5 under 35 U.S.C. §102(e) has been overcome. Applicants request that the Examiner allow Claim 5.

(6) In particular, the Examiner concluded that Claim 6 is anticipated by Alao et al., and cited three paragraphs of Alao et al., in support thereof. Applicants respectfully disagree with the Examiner. The Examiner relied upon paragraphs 0179, 0187 and 0197 of Alao et al., to reject Claim 6. The Examiner's reliance upon the aforementioned paragraphs of Alao et al., is misplaced for the following reasons. Paragraph 0179 of Alao et al., mentions string substitution in the context of HTTP, which is not the same as translating a dataset from one schema to another schema. Furthermore, this paragraph fails to disclose any restriction to a Java String class (in any context), as recited for Claim 6. Paragraph 0187 of Alao et al., mentions string values of parameters, but fails to disclose any restriction to a Java String class, as recited for Claim 6. Paragraph 0197 of Alao et al., is irrelevant to the Java String class, except in its mention of DOM, which happens to use the Java String class to parse XML in the context of a communication protocol, and not in the context of a schema. In addition, Claim 6 depends upon Claim 5, and because dependent claims recite all the limitations of the independent claim, it is believed that Claim 6 also recites in allowable form. Therefore, in view of the foregoing remarks, Applicants believe that the rejection of Claim 6 under 35 U.S.C. §102(e) has been overcome. Applicants request that the Examiner allow Claim 6.

(7) In particular, the Examiner concluded that Claims 7 and 30 are anticipated by Alao et al., and cited several paragraphs of Alao et al., in support thereof. Applicants respectfully disagree with the Examiner. The fourth step of Claims 7 and 30 is set forth below for the Examiner's convenience.

“upon receipt of ACK, removing translated dataset from persistent memory.”

The Examiner concluded that the fourth step of Claims 7 and 30 is anticipated by Alao, et al., and relied upon paragraphs 0059, 0067, 0097, 0102 and 0179 of Alao et al., in support thereof. The Examiner's reliance upon these aforementioned paragraphs of Alao et al., is misplaced because none of the cited paragraphs teaches or anticipates the concept of persistent storage, i.e., that the storage would be recoverable after a server

crash. More specifically, Alao et al., fail to teach “upon receipt of ACK, removing translated dataset from persistent memory”, as recited in the fourth step of Claims 7 and 30. In addition, Claim 7 depends upon Claim 1, and because dependent claims recite all the limitations of the independent claim, it is believed that Claim 7 also recites in allowable form. Also, Claim 30 depends upon Claim 28, and because dependent claims recite all the limitations of the independent claim, it is believed that Claim 28 also recites in allowable form. Therefore, in view of the foregoing remarks, Applicants believe that the rejection of Claims 7 and 30 under 35 U.S.C. §102(e) has been overcome.

Applicants request that the Examiner allow Claims 7 and 30.

(8) In particular, the Examiner concluded that Claim 8 is anticipated by Alao et al., and cited four paragraphs of Alao et al., in support thereof. Applicants respectfully disagree with the Examiner. The Examiner relied upon paragraphs 0070, 0146, 0150 and 0197 of Alao et al., to reject Claim 8. The Examiner’s reliance upon the aforementioned paragraphs of Alao et al., is misplaced for the following reasons. Paragraph 0070 of Alao et al., discloses business rules in a communication protocol context, not rules for translating datasets from one schema to another schema. Paragraph 0146 of Alao et al., merely discloses adding new document type definitions (DTDs), which are different than dataset schemas, and does not disclose rules for translation between schemas. Paragraph 0150 of Alao et al., states, “Specific DAML requests and responses are interactions that are related to each other. The rules for their interaction are modularized in the STB and application server components.” However, these rules of Alao et al., are not rules for translating a dataset from one schema to another schema, as in the Applicants’ invention. Paragraph 0197 of Alao et al., makes no mention of a number or structure of any rules for translation. Claim 8 recites a simple user interface for specifying mapping rules by limiting the number of rule types. Alao et al., do not disclose a user interface for specifying mapping rules. In addition, Claim 8 depends upon Claim 1, and because dependent claims recite all the limitations of the independent claim, it is believed that Claim 8 also recites in allowable form. Therefore, in view of the foregoing remarks,

Applicants believe that the rejection of Claim 8 under 35 U.S.C. §102(e) has been overcome. Applicants request that the Examiner allow Claim 8.

(9) In particular, the Examiner concluded that Claims 10 and 31 are anticipated by Alao et al., and cited numerous paragraphs of Alao et al., in support thereof. Applicants respectfully disagree with the Examiner. The Examiner's reliance upon Alao et al., is misplaced for the following reasons.

Regarding the first step of Claims 10 and 31: Paragraph 0172 of Alao et al., merely discloses "completing or modifying the request or responses to incorporate data coming from another system", in a communication protocol context. Alao et al., fail to teach "scanning a database for outgoing requests", as recited for the first step of Claims 10 and 31. Paragraph 0181 of Alao et al., merely discusses completing "requests for HTML page . . ." "with information from another process or file or database". There is no mention of scanning a database for outgoing requests. Paragraph 0183 of Alao et al., merely discloses accessing "an external process/file/database/url . . . to get user name." There is no mention of scanning a database for outgoing requests. In each case, in Alao et al., the database is accessed to retrieve specifically requested data, rather than scanned for outgoing requests, as in Applicants' invention. The database in accordance with Applicants' invention contains both the data and an indication or request to send the data. This is completely different from the case in Alao et al., where the "request" is a request for data, and the request comes from outside the database.

Regarding the second step of Claims 10 and 31: Paragraph 0074 of Alao et al., merely discloses communication protocols and sessions, and has no relevancy to "converting a source dataset to a neutral dataset". Paragraphs 0124, 0167, 0173 and 0174 of Alao et al., discuss translating communication protocols, not converting datasets. There is a big difference between translating one communication protocol into another communication protocol, and converting a dataset organized according to one schema into a dataset organized according to another schema.

Regarding the third step of Claims 10 and 31: Claims 10 and 31 have been amended by replacing the word "translated" with the word "neutral" in the third step of

Amended Claims 10 and 31.

Claims 10 and 31 have also been amended as follows. In Amended Claim 10, line 4, "translated dataset" was changed to "neutral dataset", for consistency with the term "neutral dataset" that appears in line 3 of the same claim. In Amended Claim 31, line 6, "translated dataset" was changed to "neutral dataset", for consistency with the term "neutral dataset" that appears in line 5 of the same claim. No new matter was added.

By this amendment, Claims 10 and 31 were amended to correct minor informalities, and not for patentability or to further limit the claim in view of any prior art.

Therefore, in view of the amendments to Claims 10 and 31 and in view of the foregoing remarks, Applicants believe that the rejection of Amended Claims 10 and 31 under 35 U.S.C. §102(e) has been overcome. Applicants request that the Examiner allow Amended Claims 10 and 31.

(10) In particular, the Examiner concluded that Claim 11 is anticipated by Alao et al., and cited four paragraphs of Alao et al., in support thereof. Applicants respectfully disagree with the Examiner. The Examiner relied upon paragraphs 0143, 0146, 0150 and 0197 of Alao et al., to reject Claim 11. The Examiner's reliance upon the aforementioned paragraphs of Alao et al., is misplaced because these paragraphs merely disclose XML as a useful method of organizing data. The paragraphs discuss DAML as consisting of a number of XML schemas. The paragraphs do not mention the concept of translating a source dataset into an XML document, as recited in Claim 11. These paragraphs are inapplicable to the Applicants' claimed invention because DAML is a communication protocol. As stated in paragraph 0145 of Alao et al., "DAML is an application level communication protocol, utilized to specify communication behavior and communication data for interactive TV services". In addition, Claim 11 depends upon Amended Claim 10, and because dependent claims recite all the limitations of the independent claim, it is believed that Claim 11 also recites in allowable form. Therefore, in view of the foregoing remarks, Applicants believe that the rejection of Claim 11 under 35 U.S.C. §102(e) has

been overcome. Applicants request that the Examiner allow Claim 11.

(11) In particular, the Examiner concluded that Claims 14 and 32 are anticipated by Alao et al., and cited numerous paragraphs of Alao et al., in support thereof. Applicants respectfully disagree with the Examiner. The Examiner's reliance upon Alao et al., is misplaced for the following reasons.

Regarding the first and second steps of Claims 14 and 32: Paragraph 0007 of Alao et al., merely discloses prompting a view for input and obtaining input from other sources. Paragraph 0008 of Alao et al., discusses translation "of the various contents and protocols." This paragraph also discusses "adaptive control of access, content and scheduling in an interactive television environment". These discussions are general and without specific steps, and once again, deal with communication protocols. Paragraph 0074 of Alao et al., mentions using HTTP to "connect for a short period of time to access data" and suggests that the SP/SGW "then uses the data locally". There is no mention of accessing a database for data which is then used to alter input to the accessed database, as in Applicants' invention. Paragraph 0124 of Alao et al., discusses translating from one communication protocol to another communications protocol, and not translating between schemas. Paragraph 0167 of Alao et al., discusses a roundtrip scenario interaction between a viewer and "its TV Web page". There is no mention of databases or translation of datasets, as in Applicants' invention. Paragraphs 0173-0174 of Alao et al., discuss caching and communication protocol scenarios. Again, there is no mention of databases or translation of datasets.

Regarding the third and fourth steps of Claims 14 and 32: Paragraphs 0059-0060, 0067 and 0172 of Alao et al., discuss using information in various databases to govern what information is sent to specific viewers. Alao et al., does not disclose the steps of Claims 14 and 32 regarding sending a modified dataset to a database. Paragraph 0193 of Alao et al., discusses a broadcast mode, and is irrelevant to Claims 14 and 32.

Regarding the fifth step of Claims 14 and 32: Paragraphs 0176-0177 discuss caching and communication protocol scenarios. These paragraphs do not mention databases or translation of datasets. Paragraph 0188 of Alao et al., discusses service

request loads and capacities. This paragraph does not mention databases or translation of datasets.

Therefore, in view of the foregoing remarks, Applicants believe that the rejection of Claims 14 and 32 under 35 U.S.C. §102(e) has been overcome. Applicants request that the Examiner allow Claims 14 and 32.

(12) In particular, the Examiner concluded that Claim 15 is anticipated by Alao et al., and cited four paragraphs of Alao et al., in support thereof. Applicants respectfully disagree with the Examiner. The Examiner relied upon paragraphs 0143, 0146, 0150 and 0197 of Alao et al., to reject Claim 15. The Examiner's reliance upon the aforementioned paragraphs of Alao et al., is misplaced because these paragraphs merely disclose XML as a useful method of organizing data. However, these paragraphs do not mention translating a source dataset into XML. These paragraphs also discuss DAML. However, as stated in paragraph 0145 of Alao et al., "DAML is an application level communication protocol, utilized to specify communication behavior and communication data for interactive TV services", therefore, the use of DAML does not anticipate the Applicants' invention. In addition, Claim 15 depends upon Claim 14, and because dependent claims recite all the limitations of the independent claim, it is believed that Claim 15 also recites in allowable form. Therefore, in view of the foregoing remarks, Applicants believe that the rejection of Claim 15 under 35 U.S.C. §102(e) has been overcome. Applicants request that the Examiner allow Claim 15.

(13) In particular, the Examiner concluded that Claim 19 is anticipated by Alao et al., and cited numerous paragraphs of Alao et al., in support thereof. Applicants respectfully disagree with the Examiner. The Examiner's reliance upon Alao et al., is misplaced for the following reasons. Paragraph 0045 of Alao et al., describes a central component H2O that "converts HTML content into SP/client readable content". The paragraph suggests that such content passes through a SGW component that "performs transport conversion to convert the STB DATP protocol into a standare [sic] communication protocol". Note that conversion of *communication protocols* is not the same as conversion of *content*.

Alao et al., do not teach a central component that converts XML content to XML content surrounded by gateway components that convert XML content to application specific formats. Paragraphs 0099-0100 of Alao et al., discuss the communication protocol DATP, including breaking messages into packets and maintaining and multiplexing of sessions. There is no discussion of content conversion. Paragraphs 0139, 0146, and 0150 of Alao et al., discuss DAML as XML and describe creating multiple DTDs. There is no mention in these paragraphs of Alao et al., of converting data from one schema to another schema, both at a central component and at gateway components. The Service Gateway of Alao et al., converts *communication protocols*. The gateway components of the Applicants' invention convert *content*. Paragraph 0151 of Alao et al., discusses only communication protocols. Paragraphs 0173-0174 of Alao et al., discuss caching of content and conversion of communication protocols. There is no mention of performing content conversion at both a central bridge component and at multiple gateway components. Paragraph 0197 of Alao et al., discusses content parsing (DOM), merging and mixing at the H2O component. There is no mention of performing content conversion at both a central bridge component and at multiple gateway components.

By this Amendment, Claim 19 was amended to correct minor informalities, and not for patentability or to further limit the claim in view of any prior art. In Amended Claim 19, line 5, the term "gateway" was changed to "application specific gateway component", for consistency with line 4 of the same claim. No new matter was added.

Therefore, in view of the amendment to Claim 19 and in view of the foregoing remarks, Applicants believe that the rejection of Amended Claim 19 under 35 U.S.C. §102(e) has been overcome. Applicants request that the Examiner allow Amended Claim 19.

(14) In particular, the Examiner concluded that Claim 20 is anticipated by Alao et al., and cited four paragraphs of Alao et al., in support thereof. Applicants respectfully disagree with the Examiner. The Examiner relied upon paragraphs 0167, 0176-0177 and 0188 of Alao et al., to reject Claim 20. The storage described in Alao et al., does not take place in the context of multiple places where content is converted from one schema to

another, such as the plurality of application specific gateway components and the bridge component of the Applicants' invention. By this Amendment, Claim 20 was amended to correct minor informalities, and not for patentability or to further limit the claim in view of any prior art. In Amended Claim 20, the term "gateways" was changed to "gateway components", and the term "bridge" was changed to "bridge component", for internal consistency. No new matter was added. In addition, Amended Claim 20 depends upon Amended Claim 19, and because dependent claims recite all the limitations of the independent claim, it is believed that Amended Claim 20 also recites in allowable form. Applicants request that the Examiner allow Amended Claim 20. Therefore, in view of the amendments to Claim 20 and in view of the foregoing remarks, Applicants believe that the rejection of Amended Claim 20 under 35 U.S.C. §102(e) has been overcome.

(15) In particular, the Examiner concluded that Claim 21 is anticipated by Alao et al., and cited several paragraphs of Alao et al., in support thereof. Applicants respectfully disagree with the Examiner. The Examiner relied upon paragraphs 0141, 0174, 0177, 0189-0190 and 0192 of Alao et al., to reject Claim 21. Claim 21 depends upon Amended Claim 19, and because dependent claims recite all the limitations of the independent claim, it is believed that Claim 21 also recites in allowable form. Therefore, in view of the foregoing remarks, Applicants believe that the rejection of Claim 21 under 35 U.S.C. §102(e) has been overcome. Applicants request that the Examiner allow Claim 21.

(16) In particular, the Examiner concluded that Claim 22 is anticipated by Alao et al., and cited several paragraphs of Alao et al., in support thereof. Applicants respectfully disagree with the Examiner. The Examiner relied upon paragraphs 0038-0039, 0140, 0143, 0146, 0150 and 0197 of Alao et al., to reject Claim 22. The Examiner's reliance upon the aforementioned paragraphs of Alao et al., is misplaced for the following reasons. Paragraphs 0038-0039 of Alao et al., discuss communication protocols, not content conversion. Paragraphs 0140, 0143, 0146 and 0150 of Alao et al., mention XML, but do not discuss content conversion. Paragraph 0197 of Alao et al., discusses content parsing (DOM), merging and mixing at the H2O component. There is no mention of

performing content conversion according to a set of mapping rules, as recited in Claim 22. In addition, Claim 22 depends upon Amended Claim 19, and because dependent claims recite all the limitations of the independent claim, it is believed that Claim 22 also recites in allowable form. Therefore, in view of the foregoing remarks, Applicants believe that the rejection of Claim 22 under 35 U.S.C. §102(e) has been overcome. Applicants request that the Examiner allow Claim 22.

(17) In particular, the Examiner concluded that Claim 23 is anticipated by Alao et al., and cited several paragraphs of Alao et al., in support thereof. Applicants respectfully disagree with the Examiner. The Examiner relied upon paragraphs 0028, 0034, 0045-0047, 0129, 0139, 0174 and 0198 of Alao et al., to reject Claim 23. The Examiner's reliance upon the aforementioned paragraphs of Alao et al., is misplaced for the following reasons. Paragraph 0028 of Alao et al., merely discusses using H2O to translate HTML to SP. Paragraph 0034 of Alao et al., discusses data compression and decompression, and has no relevancy to translation from one schema to another schema. Paragraphs 0045-0047 of Alao et al., discuss H2O, Content Conversion and Content Filters, as ways content is translated, but with no further details. Paragraph 0045 describes the Service Gateway, or SGW, of Alao et al., as follows: "SGW 246 performs **transport conversion** to convert the STB DATP protocol into a standare [sic] **communication protocol** which the Platform Business Agents 226 and H2O 248 understand". Paragraph 0129 of Alao et al., discusses support for the communication protocol, and has no relevancy to dataset translation. Paragraph 0139 of Alao et al., discusses DAML and DATP. DAML is a metalanguage for encapsulating messages between SP application and other application servers. The DAML metalanguage facilitates translation from one kind of communication protocol into another communications protocol (e.g. SMTP). No details of the translation methods are discussed. DATP is a transport protocol, and, therefore, is not related to Applicants' invention. Paragraph 0174 of Alao et al., discusses a scenario in which the communication protocol interacts with the Compiled Object Cache and H2O browser engine. This paragraph has no relevancy to dataset translation except to mention H2O.

Paragraph 0198 of Alao et al., discusses security related issues including encryption, which are irrelevant to dataset translation from one schema to another schema. There is no mention in any of the paragraphs cited from Alao et al., of any rules for translating datasets from one schema to another schema, or of any structure for those rules. In particular, there is no teaching of rules that comprise a type and instructions with the type containing all information about relationships among the data elements used by the function specified in the instructions. Alao et al., do not disclose any details of translating datasets from one schema to another schema. Alao et al., fail to disclose rules for such translations beyond suggesting the idea that one should translate between named pairs of languages. In addition, Claim 23 depends upon Claim 22, and because dependent claims recite all the limitations of the independent claim, it is believed that Claim 23 also recites in allowable form. Therefore, in view of the foregoing remarks, Applicants believe that the rejection of Claim 23 under 35 U.S.C. §102(e) has been overcome. Applicants request that the Examiner allow Claim 23.

(18) In particular, the Examiner concluded that Claim 24 is anticipated by Alao et al., and cited several paragraphs of Alao et al., in support thereof. Applicants respectfully disagree with the Examiner. The Examiner relied upon paragraphs 0046-0049, 00058, 0066 and 0070 of Alao et al., to reject Claim 24. The Examiner's reliance upon the aforementioned paragraphs of Alao et al., is misplaced because these paragraphs merely disclose business rules, not mapping rules, for translating a dataset from one schema to another. In addition, Claim 24 depends upon Claim 23, and because dependent claims recite all the limitations of the independent claim, it is believed that Claim 24 also recites in allowable form. Therefore, in view of the foregoing remarks, Applicants believe that the rejection of Claim 24 under 35 U.S.C. §102(e) has been overcome. Applicants request that the Examiner allow Claim 24.

(19) In particular, the Examiner concluded that Claim 25 is anticipated by Alao et al., and cited two paragraphs of Alao et al., in support thereof. Applicants respectfully disagree with the Examiner. The Examiner relied upon paragraphs 0190 and 0197 of

Alao et al., to reject Claim 25. The Examiner's reliance upon the aforementioned paragraphs of Alao et al., is misplaced because these paragraphs merely mention Java Script, and not in the context of mapping rules for translating a dataset from one schema to another. In paragraph 0190 of Alao et al., Java Script is suggested as a language that might be translated, and not a means of expressing the instructions of mapping rules. In paragraph 0197 of Alao et al., Java Script is mentioned as a "function request (HTTP like)" suggesting that Java Script is part of a communication request language rather than a language for expressing instructions for mapping rules. In addition, Claim 25 depends upon Claim 24, and because dependent claims recite all the limitations of the independent claim, it is believed that Claim 25 also recites in allowable form. Therefore, in view of the foregoing remarks, Applicants believe that the rejection of Claim 25 under 35 U.S.C. §102(e) has been overcome. Applicants request that the Examiner allow Claim 25.

(20) In particular, the Examiner concluded that Claim 26 is anticipated by Alao et al., and cited numerous paragraphs of Alao et al., in support thereof. Applicants respectfully disagree with the Examiner. The Examiner's reliance upon Alao et al., is misplaced for the following reasons.

Regarding the first element of Claim 26: Paragraphs 0058, 0066 and 0070 of Alao et al., merely disclose business rules, not mapping rules for translating a dataset from one schema to another.

Regarding the second element of Claim 26: Paragraphs 0099-0100 of Alao et al., discuss the communication protocol DATP, including breaking messages into packets and maintaining and multiplexing of sessions. There is no discussion of content conversion. Paragraph 0139 of Alao et al., discusses DAML and DATP. DAML is a metalanguage for encapsulating messages between SP application and other application servers. The DAML metalanguage facilitates translation from one kind of communication protocol into another (e.g. SMTP). No details of the translation methods are discussed. DATP is a transport protocol, and is, therefore, not relevant to Applicants' invention. Paragraph 0146 of Alao et al., suggests a relationship between DAML syntax and "actions for the application servers to perform". There is no mention of any method

that might be used to translate DAML into some sort of action language, and no mention of the existence of rules for such translation. Paragraph 0150 of Alao et al., mentions XML but does not discuss content conversion. Paragraph 0151 of Alao et al., discusses only communication protocols. Paragraphs 0173-0174 of Alao et al., discuss caching and communication protocol scenarios. There is no mention of rules for content conversion. Paragraph 0197 of Alao et al., does not mention mapping rules for content conversion.

Regarding the third element of Claim 26: Paragraph 0036 of Alao et al., discusses processing power not being required at certain components. This paragraph mentions “heavy parsing or other processing-intensive operations”, but with no further relevant details. Paragraph 0135 of Alao et al., discusses the communication protocol DATP. References to parsing in this paragraph refer to communication protocol parsing of packets, not to parsing of XML for data conversion. Paragraph 0183 of Alao et al., discusses data conversion at a central component. There is no detail about how data is converted. In particular, there is no mention of mapping rules. Paragraph 0186 of Alao et al., discusses parsing of HTTP (communication protocol) requests and responses. This paragraph mentions H2O, but makes no explicit mention of content parsing or conversion. Paragraph 0191 of Alao et al., discusses content conversion by H2O, and merely mentions that “The parsing depends on the type of document”. There are no further details about how documents are parsed or converted.

Regarding the fourth element of Claim 26: Paragraphs 0099-0100 of Alao et al., discuss the communication protocol DATP, including breaking messages into packets and maintaining and multiplexing of sessions. There is no discussion of content conversion. Paragraph 0189 of Alao et al., discusses the use of H2O to convert datasets. There are no details about how documents are converted. Instead, there is the suggestion that one can make use of known data conversion methods, which *teaches against* the Applicants’ invention.

Regarding the fifth element of Claim 26: There is no mention in any of the cited paragraphs from Alao et al., of any rules for translating datasets from one schema to another schema, or of any structure for those rules. In particular, there is no teaching of rules that comprise a type and instructions with the type containing all information about

relationships among the data elements used by the function specified in the instructions. Alao et al., do not discuss any of the details of translating datasets from one schema to another schema. Alao et al., do not discuss rules for such translations.

In addition, Claim 26 depends upon Amended Claim 19, and because dependent claims recite all the limitations of the independent claim, it is believed that Claim 26 also recites in allowable form. Therefore, in view of the foregoing remarks, Applicants believe that the rejection of Claim 26 under 35 U.S.C. §102(e) has been overcome. Applicants request that the Examiner allow Claim 26.

Claim Rejections - 35 USC §103

The Examiner rejected Claims 12 and 27 under 35 U.S.C. §103(a) as being unpatentable over Alao et al., (US2002/0108121), and further in view of Draper et al., (US Patent 6,581,062).

(21) Claim 12 depends upon Claim 11, and because dependent claims recite all the limitations of the independent claim, it is believed that Claim 12 also recites in allowable form. In view of the remarks set forth herein regarding Claim 11, Applicants believe that the combination of Alao et al., and Draper et al., does not teach or suggest all the steps of Claim 12, and that the rejection of Claim 12 under 35 U.S.C. §103(a) has been overcome. Therefore, Applicants request that the Examiner allow Claim 12.

(22) By this amendment, Claim 27 was amended to correct minor informalities, and not for patentability or to further limit the claim in view of any prior art. In Amended Claim 27, line 1, the term “application specific gateway” was changed to “each application specific gateway component”, for consistency with Amended Claim 19. No new matter was added. Furthermore, Amended Claim 27 depends upon Amended Claim 19, and because dependent claims recite all the limitations of the independent claim, it is believed that Amended Claim 27 also recites in allowable form. In view of the remarks set forth herein regarding Amended Claim 19, Applicants believe that the combination of Alao et al., and Draper et al., does not teach or suggest all the elements of Amended

Claim 27, and that the rejection of Amended Claim 27 under 35 U.S.C. §103(a) has been overcome. Therefore, Applicants request that the Examiner allow Amended Claim 27.

(23) The Examiner rejected Claims 16 and 17 under 35 U.S.C. §103(a) as being unpatentable over Alao et al., (US2002/0108121), and further in view of Dungan et al., (US Patent 6,363,411).

Dungan et al., col. 46, lines 8-65, discusses method steps involving the generation of a null value (lines 16-17) and various method steps with the purpose of obtaining specific required data. There is no mention of modifying a dataset by replacing null values with other data values (as recited by Claim 16), except in the process of the original generation of the dataset. Dungan et al., col. 110, line 25 to col. 111, line 35, discusses actions taken based on a determination of whether a given data value is null. There is no mention of replacing the null values. Dungan et al., does not discuss the treatment of null values within the context of dataset conversion.

Furthermore, Claim 17 depends upon Claim 16, and because dependent claims recite all the limitations of the independent claim, it is believed that Claim 17 also recites in allowable form. In view of the remarks set forth herein regarding Claims 14 and 15, upon which Claims 16 and 17 depend, Applicants believe that the combination of Alao et al., and Dungan et al., does not teach or suggest all the steps of Claims 16 and 17, and that the rejection of Claims 16 and 17 under 35 U.S.C. §103(a) has been overcome. Applicants request that the Examiner allow Claims 16 and 17.

Allowable Subject Matter

(24) The Examiner indicated that Claims 9, 13 and 18, objected to as being dependent upon a rejected base claim, would be allowable if rewritten in independent form including all the limitations of the base claim and any intervening claims. However, in view of the remarks set forth in this Amendment, and in view of the amendment to Claim 10, Applicants believe that the respective base claims for dependent Claims 9, 13 and 18 are allowable. Therefore, Applicants respectfully request that the Examiner withdraw the objection to Claims 9, 13 and 18.

Conclusion

The foregoing is submitted as a full and complete response to the Official Action mailed December 22, 2004, and it is suggested that Claims 1-32 are in condition for allowance. Reconsideration of the rejection is requested. Allowance of Claims 1-32 is earnestly solicited.

No amendment made was related to the statutory requirements of patentability unless expressly stated herein. No amendment made was for the purpose of narrowing the scope of any claim, unless Applicants have argued herein that such amendment was made to distinguish over a particular reference or combination of references.

Applicants acknowledge the continuing duty of candor and good faith to disclose information known to be material to the examination of this application. In accordance with 37 CFR §1.56, all such information is dutifully made of record. The foreseeable equivalents of any territory surrendered by amendment are limited to the territory taught by the information of record. No other territory afforded by the doctrine of equivalents is knowingly surrendered and everything else is unforeseeable at the time of this amendment by the Applicants and their attorneys.

The present application, after entry of this amendment, comprises thirty-two (32) claims, including seven (7) independent claims. Applicants have previously paid for thirty-two (32) claims including seven (7) independent claims. Applicants, therefore, believe that an additional fee for claims amendment is currently not due.

If the Examiner believes that there are any informalities that can be corrected by Examiner's amendment, or that in any way it would help expedite the prosecution of the patent application, a telephone call to the undersigned at (561) 989-9811 is respectfully solicited.

The Commissioner is hereby authorized to charge any fees that may be required or credit any overpayment to Deposit Account 50-1556.

In view of the preceding discussion, it is submitted that the claims are in condition for allowance. Reconsideration and re-examination is requested.

Respectfully submitted,

Date: 3/4/05

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Amendment to the Drawings:

Please replace sheet 4 of the Drawings (FIG. 4) with the sheet identified on the top margin as "Replacement Sheet" and that is attached to this Amendment. In the Replacement Sheet of the Drawing, reference numbers 106 and 104 of FIG. 4 have been changed to 116 and 118, respectively. FIG. 4 is a more detailed block diagram showing an exemplary XML gateway of the system of FIG. 1 that shows two XML gateways 116 and 118. By this amendment, the reference numerals of FIG. 4 of the Replacement Sheet are now consistent with the reference numerals that appear on FIGs. 1 and 2 for the same two XML gateways. No new matter was added.